

J-25328.0002 ond.662

March 2, 2017

Mark Yodice, PE Thomas & Hutton P.O. Box 1522 Mount Pleasant, SC 29465

RE:

Construction Permit 39296-WW Modification

Kiawah River Plantation WWTP

Charleston County

Dear Mr. Yodice:

We have received and reviewed your construction permit modification request dated January 19, 2017, with additional information provided in your letter of February 21, 2017. The plans submitted with your request follow the previously approved Preliminary Engineering Report – Addendum No. 01 dated November 2016, and approved on December 21, 2016.

Please see the enclosed modified construction permit. Please contact me at (803) 898-1271 or edwardaj@dhec.sc.gov if you have any questions.

Sincerely,

Andrew]. Edwards

Domestic Wastewater Permitting Section

Water Facilities Permitting Division

Michael Montebello, Manager, Domestic Wastewater Permitting Section cc:

Harvey Wilkins, Low Country Region BEHS Charleston Office

Kevin O'Neill, 211 King Street, Suite 300, Charleston, SC 29401

Wastewater Construction Permit Bureau of Water



PROJECT NAME: KIAWAH RIVER PLANTATION WWTP COUNTY: CHARLESTON

LOCATION: 2501 Mullet Hall Road, Johns Island, SC 29455

KIAWAH RIVER PLANTATION HOLDINGS, LP PERMISSION IS HEREBY GRANTED TO:

211 KING STREET

SUITE 300

CHARLESTON, SC 29401

for the construction of a new wastewater treatment plant in accordance with the construction plans, specifications, design calculations and the Construction Permit Application signed by Mark Yodice, Registered Professional Engineer, S.C. Registration Number: 13293.

PROJECT DESCRIPTION:

Phase I of the wastewater treatment plant will be 110,000 gpd. Treatment processes will include initial screening followed by membrane bioreactor treatment from a MicroBLOX modular unit by Ovivo and UV disinfection, prior to storage in a 770,000 gallon lined lagoon. Wastewater effluent from the lagoon will be pumped to an adjacent 16.65acre land application site where it will be applied with low trajectory spray heads at a rate not exceeding 2.0 inches/week for a total capacity of 129,037 gpd. Solids will be dewatered and hauled to the Oakridge Landfill.

TREATMENT FACILITY:

The effluent will be discharged to the Kiawah River Plantation Wastewater Treatment Plant with a design flow rate of 110,000 gallons per day. The effluent concentrations of those constituents the wastewater treatment system is designed to remove or reduce are contained in NPDES permit ND0088897.

Treatment Plant Classification: Group IV - Physical/Chemical

STANDARD CONDITION:

In accepting this permit, the owner agrees to the admission of properly authorized persons at all reasonable hours for the purpose of sampling and inspection. This is a permit for construction only and does not constitute DHEC approval, temporary or otherwise, to place the system in operation. An Approval to Place in Operation is required and can be obtained following the completion of construction by contacting the Low Country Region BEHS Charleston Office at (843) 953-0150. Additional permits may be required prior to construction (e.g., Stormwater).

SPECIAL CONDITIONS:

None

PERMIT NUMBER:	39296-WW
ISSUANCE DATE:	January 13, 2016
EXPIRATION	March 2, 2018 (to begin construction)
DATES:	March 2, 2020 (to obtain Approval to Place in Operation)

Jeffrey P. deBessonet, P.E., Director Water Facilities Permitting Division

AJE

Modifications:

12/12/2016 - Permit expiration date to begin construction extended from January 13, 2017, to June 13, 2017.

3/2/2017 Project modifications for reduced Phase I cost include a smaller project footprint, UV disinfection, a smaller Phase I effluent storage lagoon, and removal of sludge holding and permanent dewatering facilities from the Phase I scope. Permit expiration dates extended, respectively.

KIAWAH RIVER PLANTATION WWTP - PHASE 1 FOR

KIAWAH RIVER PLANTATION HOLDINGS, LP

CHARLESTON COUNTY, SOUTH CAROLINA

PREPARED FOR:

KIAWAH RIVER PLANTATION HOLDINGS, LP OCEAN BOULEVARD PROPERTIES A SOUTH CAROLINA LIMITED PARTNERSHIP

DECEMBER 16, 2016

TM# 212-00-00-001

J-25328.0002 PREPARED BY:

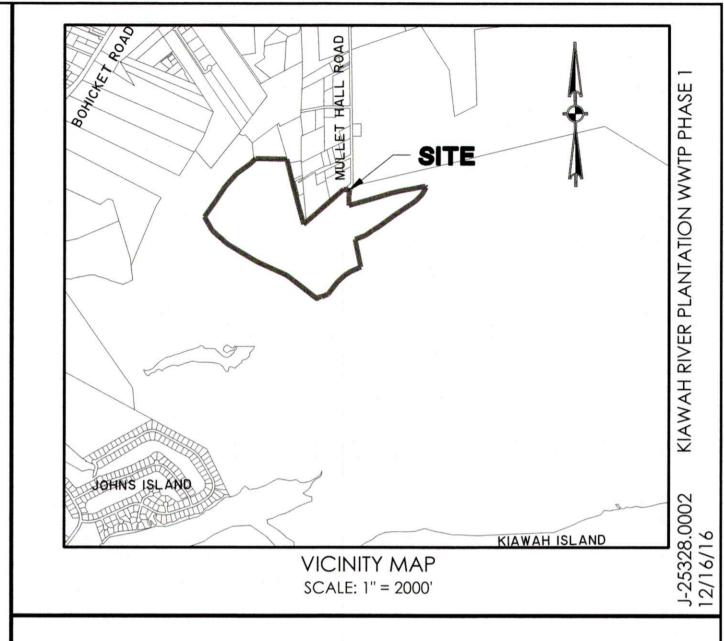


8. C. DEPT. OF HEALTH & ENVIRONMENTAL CONTROL WASTEWATER FACILITIES

PERMIT NO. 39296 - WW DATE 3/2/17



FINAL WRITTEN APPROVAL FOR OPERATION MUST



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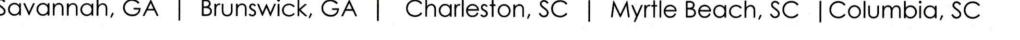


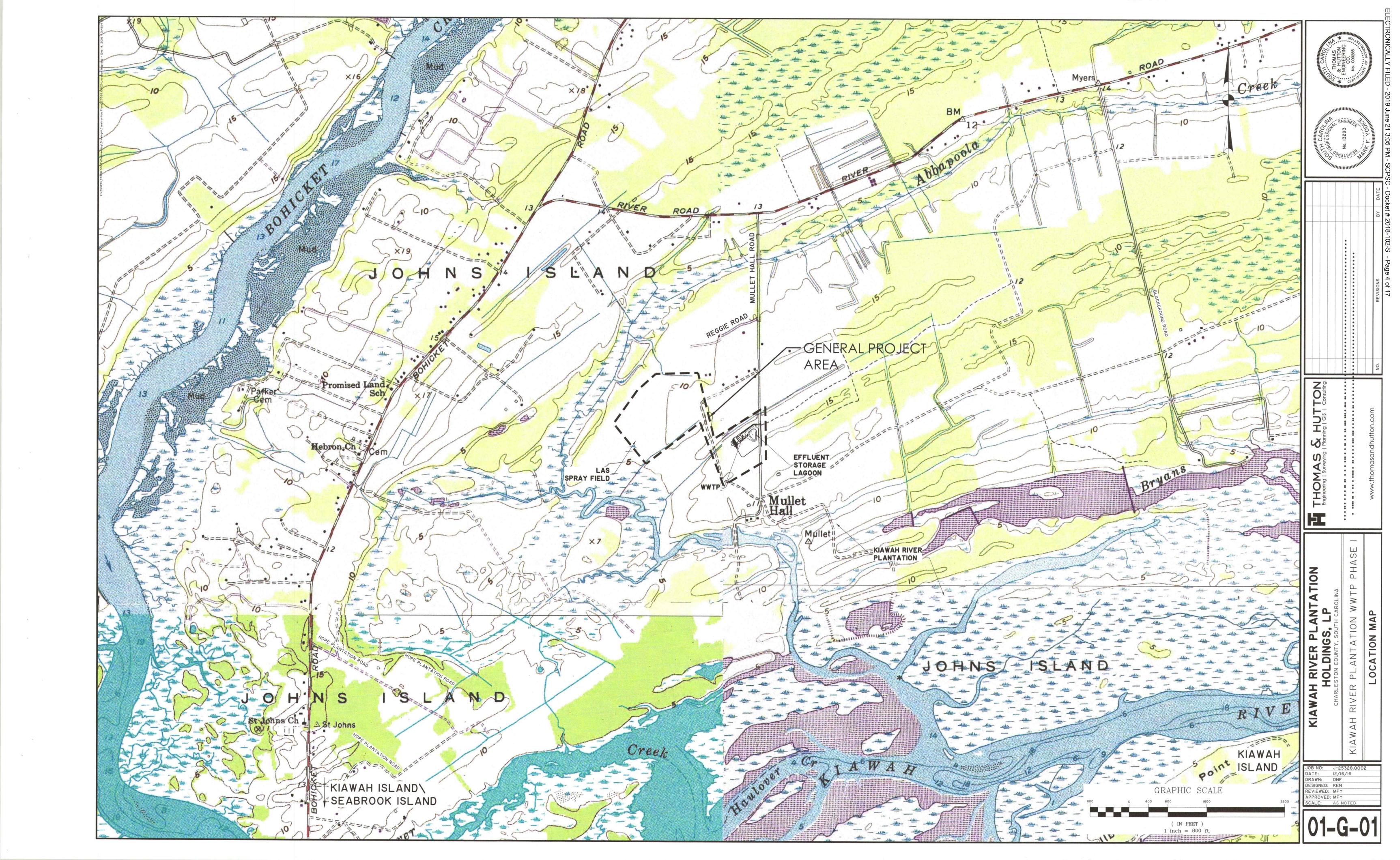
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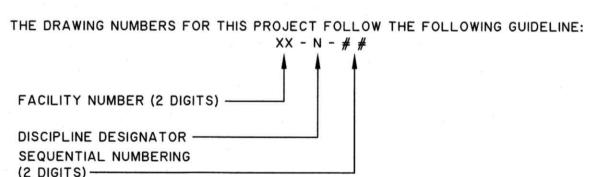


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S-C-08 SWPPP - DETAILS S-C-09 SWPPP - DETAILS S-C-10 SITE PIPING PLAN - OVERALL SITE S-C-11 CIVIL DETAILS S-C-12 CIVIL DETAILS	T&H
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-C-11 CIVIL DETAILS -C-12 CIVIL DETAILS	T&H
-C-12 CIVIL DETAILS	T&H
	T&H
0.10	T&H
-C-13 CIVIL DETAILS	Т&Н
i-C-14 CIVIL DETAILS	T&H
06- WWTP SITE	
6-C-01 SITE LAYOUT PLAN - WWTP	Т&Н
6-C-02 PIPING PLAN - WWTP	Т&Н
6-C-03 PIPING PLAN - WWTP	Т&Н
6-C-04 PAVING, GRADING & DRAINAGE PLAN - WWTP	Т&Н
5-C-05 STORM DRAIN PROFILES	Т&Н
07- EFFLUENT STORAGE LAGOON	
7-C-01 SITE LAYOUT PLAN - EFFLUENT STORAGE LAGOON	Т&Н
7-C-02 PIPING PLAN - EFFLUENT STORAGE LAGOON	Т&Н
'-C-03 PAVING, GRADING & DRAINAGE PLAN - EFFLUENT STORAGE LAGO	ON T&H
7-C-04 DETAILS AND SECTIONS - EFFLUENT HOLDING STORAGE LAGOO	N T&H
7-C-05 DETAILS AND SECTIONS - EFFLUENT STORAGE LAGOON	Т&Н
08 - SPRAYFIELD IRRIGATION PUMP STATION	
3-C-01 EFFLUENT PUMP STATION - PLAN AND SECTION	Т&Н
-C-02 EFFLUENT PUMP STATION - SECTION AND DETAILS	Т&Н
	CHATM
	11

SHEET NO.		
	DESCRIPTION	BY
	09 - LAND APPLICATION SPRAYFIELD (LAS)	
09-C-01	SITE PIPING PLAN - LAS	Т&Н
09-C-02	DETAILS AND SECTIONS - LAS	T&H
09-C-03	DETAILS AND SECTIONS - LAS	T&H
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	SCHEDULE OF DRAWINGS	9
SHEET NO.	DESCRIPTION	BY
	50 - ELECTRICAL	
50-E-01	LEGEND, ABBREVIATIONS & GENERAL NOTES	CHATM
50-E-02	ELECTRICAL DETAILS & FIXTURE SCHEDULE	CHATM
50-E-03	ELECTRICAL DETAILS	CHATM
50-E-04	OVERALL PROJECT PLAN - ELECTRICAL	CHATM
50-E-05	TREATMENT PLANT SITE - ELECTRICAL	CHATM
50-E-06	TREATMENT PLANT SITE - PHOTOMETRY	СНАТМ
50-E-07	WWTP BUILDING - GROUND FLOOR - POWER	CHATM
50-E-08	WWTP BUILDING - UPPER FLOOR - POWER	CHATM
50-E-09	WWTP BUILDING - GROUND FLOOR - LIGHTING	CHATM
00-E-10	WWTP BUILDING - UPPER FLOOR - LIGHTING	CHATM
50-E-12	ONE-LINE DIAGRAM	CHATM
50-E-13	EFFLUENT PUMP STATION PLAN - ELECTRICAL	CHATM
50-E-14	SPRAYFIELD PLAN - ELECTRICAL	CHATM
50-E-15	MCC ELEVATIONS	CHATM
50-E-16	ONE-LINE DIAGRAM AND SCHEDULES	CHATM
50-E-17	MCC ELEVATIONS AND SCHEDULES	CHATM
50-E-18	OVIVO FIELD INSTRUMENT CONNECTIONS	CHATM
50-E-19	IN-PLANT SCADA FIELD INSTRUMENT CONN.	CHATM
50-E-20	IN-PLANT SCADA RISER DIAGRAM	CHATM

SHEET NO.	DESCRIPTION	BY
	60 - INSTRUMENTATION AND CONTROL BY OVIVO	1
I-1.0	MICROBLOX P & ID COVER SHEET	OVIV
I-1.1	MICROBLOX P & ID CODES LEGEND	OVI
I-1.2	MICROBLOX P & ID SYMBOLS LEGEND	OVI
I-1.3	MICROBLOX P & ID FINE SCREEN	OVI
I-1.4	MICROBLOX P & ID MEMBRANE BIOREACTOR ZONES	OVI
I-1.5	MICROBLOX P & ID TRANSFER AND WAS PUMPS	OVI
1-1.6	MICROBLOX P & ID PERMEATE CONTROL AND DISINFECTION	OVIV
I-1.7	MICROBLOX P & ID BLOWERS	OVIV
I-1.8	MICROBLOX P & ID SUPPLEMENTAL OXYGEN	OVIV
I-1.9	MICROBLOX P & ID CHEMICAL DOSING	OVIV
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FACILITY NUMBER	DISCIPLINE DESIGNATOR	SEQUENTIAL NUMBERING
OI - GENERAL O2 - WATER SUPPLY LINE O5 - OVERALL SITE O6 - WASTEWATER TREATMENT PLANT SITE O7 - EFFLUENT STORAGE LAGOON O8 - SPRAYFIELD IRRIGATION PUMP STA. O9 - LAND APPLICATION SYSTEM (LAS) 50 - ELECTRICAL 60 - INSTRUMENTATION & CONTROL	C CIVIL A ARCHITECTURAL S STRUCTURAL E ELECTRICAL G GENERAL D PROCESS MECHANICAL M MECHANICAL HVAC P PLUMBING R INSTRUMENTATION & CONTROL L LANDSCAPE Y YARD PIPING V SURVEYING I INSTRUMENTATION	OI O2 O3 ETC.

PROJECT INFORMATION

OWNER: KIAWAH RIVER PLANTATION HOLDINGS, LP AND OCEAN BOULEVARD PROPERTIES LIMITED PARTERSHIP 211 KING STREET, SUITE 300 CHARLESTON, SC 29401 (843) 722-2615

SITE/STRUCTURAL: THOMAS & HUTTON 682 JOHNNIE DODDS BLVD. SUITE 100 MT. PLEASANT SC, 29464 (843) 849-0200

ARCHITECTURAL: SWALLOWTAIL ARCHITECTURE, LLC 814 N. CEDAR STREET SUMMERVILLE SC, 29483 (843) 885-9400

MEP ENGINEERING: CHATHAM ENGINEERING 109 PARK OF COMMERCE DRIVE SAVANNAH, GA 31405 912-238-2400

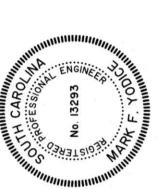
WATER: ST. JOHN'S WATER COMPANY 3362 MAYBANK HWY

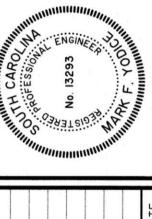
JOHN'S ISLAND, SC 29455 (843) 768-0641 POWER: BERKELEY ELECTRIC ST. JOHNS DISTRICT 3351 MAYBANK HIGHWAY P.O. BOX 1285

TELEPHONE: AT&T

ST. JOHNS, SC 29455 (843)559-2458

975 SAVANNAH HWY, SUITE 301 CHARLESTON, SC 29407 (843)556-7611





PHASE

KIAWAH RIVER PLANTATION HOLDINGS, LP
CHARLESTON COUNTY, SOUTH CAROLINA
KIAWAH RIVER PLANTATION WWTP PI
INDEX OF DRAWINGS

JOB NO: J-25328.0002
DATE: I2/I6/I6
DRAWN: DNF
DESIGNED: KEN
REVIEWED: MFY
APPROVED: MFY
SCALE: NTS

GENERAL NOTES

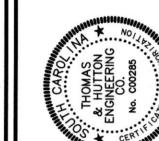
- ALL ELEVATIONS SHOWN ARE BASED ON (NAVD) 88 VERTICAL DATUM.
- THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES PRIOR TO BEGINNING DIGGING OPERATIONS. IF UTILITIES OTHER THAN THOSE SHOWN ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND TAKE STEPS TO PROTECT THE LINE(S) AND ENSURE CONTINUED SERVICE. DAMAGE CAUSED TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR, ADDITIONALLY, THE CONTRACTOR SHALL CONFIRM THE CONNECTION POINTS OF NEW UTILITIES PRIOR TO BEGINNING NEW CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNDERGROUND UTILITIES AND SHALL COORDINATE ALL WORK WITH THE OWNER AND UTILITY COMPANIES. CONTRACTOR SHALL VERIFY SIZE AND LOCATION OF ALL EXISTING UTILITIES. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- RESPONSIBILITY REGARDING EXISTING UTILITIES AND STRUCTURES: EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES WILL BE INVESTIGATED AND VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE STARTING WORK. THE LOCATION OF ALL KNOWN INTERFERENCES BASED ON THE BEST INFORMATION AVAILABLE HAS BEEN SHOWN ON THE DRAWINGS, BUT THIS INFORMATION MAY NOT BE COMPLETE. EXCAVATION IN THE VICINITY OF EXISTING STRUCTURES AND UTILITIES SHALL BE CAREFULLY DONE BY HAND. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR COORDINATING PROTECTION OF EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE UTILITY COMPANIES ANY RELOCATIONS, ADJUSTMENT, REPLACEMENT, OR PROTECTION OF UTILITY FACILITIES.
- CONTRACTOR SHALL GRADE ALL AREAS TO DRAIN FOR POSITIVE FLOW PRIOR TO FINAL APPROVAL.
- CONTRACTOR SHALL MATCH ELEVATIONS WHEN CONNECTING TO EXISTING PAVEMENT
- FIGURE DIMENSIONS ON PLANS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. DETAIL PLANS SHALL TAKE PRECEDENCE OVER GENERAL PLANS. THE DEPTH AND LENGTH OF THE PIPE SHOWN ON THE PLANS IS THE MINIMUM REQUIRED. ADDITIONAL LENGTH REQUIRED FOR INCREASED DEPTH OR BENDING RADIUS TO ACCOMMODATE THE PIPE INSTALLATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO INCREASE IN PIPE LENGTH WILL BE ACCEPTED.
- OWNER & ENGINEER HAVE THE RIGHT TO REJECT DEFECTIVE MATERIALS.
- CONTRACTOR AND SUBCONTRACTORS MUST HAVE NECESSARY CHARLESTON COUNTY AND S.C. GENERAL CONTRACTOR LICENSES.
- REFER TO THE STORMWATER POLLUTION PREVENTION PLAN SHEETS FOR INFORMATION ASSOCIATED WITH THE CONSTRUCTION GENERAL PERMIT REQUIREMENTS (STORMWATER).
- DISTURBED AREAS NOT SODDED SHALL BE HYDROSEEDED. CONTRACTOR SHALL RESEED AREAS AS NECESSARY TO ACHIEVE COMPLETE GRASS COVER IN DISTURBED AREAS. FINAL PROJECT ACCEPTANCE BY OWNER WILL NOT OCCUR UNTIL DISTURBED AREAS ARE COMPLETELY STABILIZED.
- 12. CONTRACTOR TO DISPOSE OF EXCESS MATERIAL OFFSITE OR AT A LOCATION APPROVED BY THE OWNER BUT AT NO COST TO THE OWNER.
- OMITTED.
- 14, THE CONTRACTOR SHALL PROVIDE TEMPORARY DIRVEWAY AND PARKING ACCESS FOR ALL ADJACENT PROPERTY OWNERS DURING PERIODS WHEN THE CONSTRUCTION IN THE AREA IS NOT IN PROGRESS.
- LOCATION OF PIPELINES ARE APPROXIMATE AND FIELD ADJUSTMENTS (HORIZONTALLY OR VERTICALLY) MAY BE REQUIRED TO ACCOMMODATE THE INSTALLATION AT NO ADDITIONAL COST TO THE OWNER.
- ANY CONFLICTS BETWEEN DIVISIONS SHALL BE RESOLVED IN FAVOR OF THE MORE STRINGENT OR AS DETERMINED BY THE
- 17. THE CONTRACT DOCUMENTS COMPRISE THE ENTIRE AGREEMENT BETWEEN OWNER AND CONTRACTOR CONCERNING THE WORK. THE DRAWINGS AND CONTRACT DOCUMENTS ARE COMPLIMENTARY; WHAT IS CALLED FOR BY ONE IS AS BINDING AS IF CALLED FOR
- CONTRACTOR SHALL ERECT, AS NECESSARY, TEMPORARY FENCE TO MAINTAIN SECURITY AT ALL TIMES DURING CONSTRUCTION.
- ACCESS TO THE SITE SHALL BE MAINTAINED AT ALL TIMES. DISRUPTIONS TO ACCESS SHALL BE COORDINATED WITH OWNER.
- 20. SECURITY OF THE SITE SHALL BE THE CONTRACTOR'S RESPONSIBILITY DURING THE LIFE OF THE CONTRACT. COORDINATE SECURITY MEASURES WITH OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL REQUIRED BUILDING PERMITS AND PAYING ALL ASSOCIATED FEES.
- THE TREE BARRICADES IN THE AREAS OF WORK SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO THE START OF
- RECONSTRUCT ALL DITCHES AND CULVERTS TO ORIGINAL UNDISTURBED CONDITIONS. REPLACE BROKEN CULVERTS AND REALIGN AS REQUIRED TO AVOID CONFLICT WITH NEW PIPELINE.
- TAKE CAUTION TO AVOID ANY IRRIGATION SYSTEM WHERE LOCATED ON PRIVATE PROPERTY OR IN PUBLIC R/W. DAMAGE DUE TO THE ACTION OF THE CONTRACTOR SHALL BE REPAIRED/ REPLACED BY CONTRACTOR.
- SODDED AREAS SHALL BE RESTORED WITH SIMILAR SOD IN DISTURBED AREAS.
- CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO SECURE POWER POLES DURING CONSTRUCTION AT NO COST TO THE 26. OWNER.
- SEWER LATERALS EXIST IN SOME OF THE PROJECT AREA. CONTRACTOR SHALL USE CAUTION IN AREAS WITH EXISTING SEWER. ANY DAMAGE TO SEWER SHALL BE REPAIRED AT NO COST TO THE OWNER. CHARLESTON COUNTY WILL VIDEO TAPE EXISTING SEWER LINE AND APPROXIMATE SERVICE LATERAL LOCATIONS PRIOR TO CONTRACTOR COMMENCING.
- CONTRACTOR SHALL RESTORE ALL LAY DOWN AREAS TO PRE-CONSTRUCTION CONDITION AT NO COST TO THE OWNER. RESTORATION TO INCLUDE RAKE/REMOVAL OF AGGREGATE, PLACEMENT OF TOPSOIL (MINIMUM OF 4" DEPTH), REGRADING AND
- CONTRACTOR SHALL DE-WATER THE TRENCH IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AT NO ADDITIONAL COST TO THE OWNER.
- CONNECTION TO EXISTING WATER MAINS AND FORCE MAINS SHALL NOT COMMENCE UNTIL VERIFICATION OF LOCATIONS. DIAMETER ELEVATION AND MATERIAL AS APPLICABLE HAS BEEN PERFORMED BY THE CONTRACTOR. THE ENGINEER'S APPROVAL AND VERIFICATION SHALL BE MANDATORY PRIOR TO COMMENCING CONNECTION TO EXISTING WATER AND WASTEWATER FACILITIES.
- THE CONTRACTOR SHALL BE REQUIRED TO VIDEO TAPE RECORD AND PHOTOGRAPH THE ENTIRE LIMITS OF CONSTRUCTION TO THOROUGHLY DOCUMENT PRE-CONSTRUCTION CONDITIONS OF ALL EXISTING FACILITIES, STRUCTURES, ABOVEGROUND UTILITIES, LANDSCAPING, HARDSCAPE AND APPURTENANCES WHICH ARE EITHER TO BE PROTECTED-IN-PLACE, REMOVED AND RESET, DEMOLISHED AND RECONSTRUCTED WITH NEW MATERIALS AND/OR FIXTURES. THE VIDEO TAPE SHALL BE PROVIDED TO ENGINEER PRIOR TO CONSTRUCTION AS SPECIFIED ELSEWHERE.
- WHERE UNAUTHORIZED TREE REMOVAL OR DAMAGE OCCURS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR TREE REPLACEMENT, REPLANTING, MITIGATION AND/OR PENALTY PAYMENT, WHEREVER TREE REMOVAL OR DAMAGE EXCEEDS THAT INDICATED AND/OR AUTHORIZED DURING CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR RESETTING ANY PROPERTY CORNERS DISTURBED DURING CONSTRUCTION.
- 34. RECONSTRUCTION OF EXISTING LANDSCAPE/HARDSCAPE:
 - IRRIGATION AND LIGHTING SYSTEMS, LANDSCAPE, HARDSCAPE AND SIGNAGE WHERE PRACTICAL AND/OR COST EFFECTIVE, THE CONTRACTOR SHALL RECORD THE EXISTING LOCATION OF MAJOR HARDSCAPE COMPONENTS INCLUDING SIGNAGE, LIGHT FIXTURES, ETC., AND REMOVE THEM FOR SAFE STORAGE UNTIL REINSTALLATION CAN OCCUR.
 - LARGE SIGNS SHALL BE CAREFULLY REMOVED INTACT FOR REINSTALLATION OR DUPLICATED BY THE ORIGINAL SIGN MANUFACTURER AT THE CONTRACTOR'S EXPENSE, SIGN PYLONS, MARQUEES AND/OR MASONRY, WOODEN OR METAL FOUNDATIONS AND MOUNTING FRAMES SHALL MATCH PRE-CONSTRUCTION CONDITIONS WHERE INDICATED ON THE PLAN VIEW DRAWINGS, TEMPORARY SIGNAGE SHALL BE FURNISHED AS SPECIFIED AND/OR DIRECTED BY THE ENGINEER.
 - . WHERE LIGHTING CONDUIT, IRRIGATION LINES AND PLANT MATERIALS ARE NOT REMOVED FOR SUBSEQUENT POST-CONSTRUCTION REINSTALLATION AND REPLANTING, THE EXISTING MATERIALS SHALL BE MATCHED TO SIZE, QUALITY OF MATERIAL AND WORKMANSHIP UPON REPLACEMENT.
 - ALL LOCAL BUILDING/SIGN PERMITS OR EXISTING AGENCY OFF-SITE SIGN VARIANCE AND/OR ENCROACHMENT PERMIT CONDITIONS SHALL BE APPLICABLE TO REQUIRED CONSTRUCTION ACTIVITIES. ADDITIONAL LOCAL AGENCY PERMITS REQUIRED FOR RECONSTRUCTION SHALL BE OBTAINED BY THE CONTRACTOR AS NECESSARY TO RECONSTRUCT ALL EXISTING ANCILLARY UTILITIES AND SIGNAGE.
 - POST-CONSTRUCTION CONDITIONS SHALL MATCH PRE-CONSTRUCTION CONDITIONS TO THE GREATEST EXTENT PRACTICAL: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LABOR, MATERIALS AND WORKMANSHIP REQUIRED TO RECONSTRUCT ALL LANDSCAPE AND HARDSCAPE REMOVED AND/OR DAMAGED BY CONSTRUCTION ACTIVITIES.

GENERAL NOTES CONTINUED

- 35. THE EXHAUST SYSTEM OF ALL GASOLINE AND DIESEL ENGINES SHALL BE EQUIPPED WITH MUFFLERS THAT MEET THE EQUIPMENT MANUFACTURER'S REQUIREMENTS FOR NOISE SUPPRESSION. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER DUE TO RESIDENTIAL COMPLAINTS. INSTALL NOISE ABATEMENT BAFFLES POSITIONED LINE-OF-SITE FROM THE NOISE SOURCE TO AFFECTED RESIDENTS, AS APPROVED BY THE ENGINEER.
- 36. THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHOD AS REQUIRED.
- 37. ALL PENETRATION OF EXISTING STRUCTURES SHALL BE BY THE MECHANICAL ROTARY CORE BORING METHOD.
- 38. ALL CONCRETE PENETRATED OR DISTURBED SHALL BE COATED WITH (2) TWO COATS OF EPOXY.
- 39. FIELD CONDITIONS MAY NECESSITATE MINOR ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED UTILITIES TO AVOID OBSTACLES AS AGREED TO WITH THE OWNER AND THE ENGINEER.
- 40. FOR EXTERIOR CONTROL PANELS, ELECTRICAL EQUIPMENT RACKS AND EQUIPMENT, CONTRACTOR SHALL FABRICATE AND INSTALL A SUN/RAIN HOOD OVER THE EXTERIOR EQUIPMENT.
- CONTRACTOR SHALL SUBMIT LAYOUT OF EQUIPMENT. MAINTAIN 12" ABOVE THE TOP OF THE EQUIPMENT, AND SLOPE THE SUN/RAIN SHIELD 5 DEGREES. MAINTAIN MINIMUM 8" CLEARANCE ON SIDES AND EXTEND SUN/RAIN HOOD THE DEPTH OF THE DEEPEST PANEL PLUS 18".
- ALL MOUNTING HARDWARE TO BE STAINLESS STEEL. PROVIDE WEATHERPROOF CORROSION RESISTANT FLUORESCENT FIXTURE MOUNTED
- UNDERNEATH SUN/RAIN HOOD, LIGHT SWITCH AND GFC RECEPTACLE. d. ALL MATERIAL SHALL BE UV AND CORROSION RESISTANT.

TRAFFIC CONTROL NOTES

- THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL (II" X 17" SIZE FORMAT) FOR APPROVAL PRIOR TO STARTING WORK. THE PLAN SHALL BE SUBMITTED TO THE ENGINEER AND APPLICABLE REGULATORY AGENCY A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO NEEDING TO OBTAIN A TRAFFIC CONTROL PERMIT / APPROVAL.
- PRIOR TO THE SCHEDULING OF A PRE-CONSTRUCTION CONFERENCE, THE CONTRACTOR SHALL SUBMIT A PRELIMINARY DETAILED TRAFFIC CONTROL PLAN FOR REVIEW BY THE ENGINEER. THE TRAFFIC CONTROL PLAN AS WELL AS ALL TRAFFIC CONTROL DEVICES UTILIZED ON THE PROJECT MUST COMPLY WITH THE "FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" FOR STREETS AND HIGHWAYS, FOLLOWING APPROVAL OF THE PLAN, A REPRODUCIBLE DRAWING SHALL BE SUBMITTED TO SCDOT.
- NOTIFY SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION A MINIMUM OF THREE (3) FULL WORKING DAYS BEFORE COMMENCING WORK. OBTAIN AND KEEP A COPY OF THE SCDOT PERMIT ON SITE AT ALL TIMES. NO WORK CAN BE STARTED UNTIL ALL NECESSARY PERMITS ARE ONSITE.
- 4. FOR ALL WORK IN SCOOT ROW, CONTRACTOR SHALL MAINTAIN TRAFFIC IN ACCORDANCE WITH SCOOT GUIDELINES. SCDOT ENCROACHMENT PERMIT MUST BE ISSUED BEFORE BEGINNING ANY WORK WITHIN SCDOT ROW.
- 5. CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL, MESSAGE BOARDS, JERSEY BARRICADES WITH CRASH ATTENUATORS ON ONE SIDE, ETC., PER SCDOT REQUIREMENTS, AT NO ADDITIONAL COST.
- ALL WORK TO BE PERFORMED IN THE SCDOT ROW WILL BE IN ACCORDANCE WITH SCDOT SPECIFICATIONS (A POLICY FOR ACCOMMODATING UTILITIES ON HIGHWAY RIGHT OF WAY), LATEST
- ALL WORK INDICATED IN THE SCOOT ROW ARE TO BE COMPLETED WITHIN ONE (I) YEAR OF THE APPROVAL DATE ON THE SCDOT PERMIT. ALL DRIVEWAY CONSTRUCTION IS TO INCLUDE THE SURFACE TREATMENT AND ALL SHOULDER STABILIZATION REQUIRED.
- ALL WORK ON HEAVILY TRAVELED ROADWAYS THAT WILL INTERRUPT TRAFFIC FLOW WILL BE DONE BETWEEN THE HOURS OF 9:00 A.M. AND 4:00 P.M. UNLESS PERMISSION FROM THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION IS OBTAINED. ADDITIONAL PROVISIONS MAY BE REQUIRED IN AREAS WHERE A SCHOOL OR HEAVY PEDESTRIAN TRAFFIC IS PRESENT.
- ANY WORK THAT IS REQUIRED ON SATURDAY MUST BE APPROVED BY THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION PRIOR TO COMPLETION OF WORK, NO SUNDAY WORK WILL BE PERMITTED UNLESS AN EMERGENCY ARISES DURING THE CONSTRUCTION OF THE PROJECT.
- IO. ALL WORK PERFORMED UNDER THE PERMIT SHALL CARRY A TWO (2) YEAR WARRANTY PERIOD BY THE CONTRACTOR. THIS PERIOD WILL BEGIN AS OF THE DATE OF THE FINAL INSPECTION AND/OR SCDOT ACCEPTANCE LETTER.
- ANY CONSTRUCTION MATERIALS OR EQUIPMENT TO BE STORED OR PARKED ALONGSIDE OF ROADWAY OR IN THE RIGHT-OF-WAY, WILL BE PLACED A MINIMUM OF 30 FEET FROM THE EDGE OF PAVEMENT. OR HAVE WARNING DEVICES AS REQUIRED AND APPROVED BY SCDOT.
- 12. NO OPEN CUTS IN EXISTING PAVEMENT ARE TO BE MADE ON FRIDAYS OR WEEKENDS.
- 13. THERE SHALL BE NO EXCAVATION OF SOIL CLOSER THAN TWO (2) FEET FROM ANY PUBLIC UTILITY POLE OR APPURTENANT FACILITY WITHOUT THE WRITTEN CONSENT OF THE OWNER THEREOF. SPECIAL PERMISSION OF THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION AFTER AN OPPORTUNITY TO BE HEARD IS GIVEN THE OWNER OF SUCH POLE OR APPURTENANT FACILITY MAY BE GIVEN.
- CONTRACTOR IS BOUND BY THE REQUIREMENTS OF THE SCHOOT ENCROACHMENT PERMIT. CONTRACTOR SHALL ABIDE BY ALL SCDOT REQUIREMENTS AT NO EXTRA COST TO THE OWNER.
- 15. CONTRACTOR IS BOUND BY THE REQUIREMENTS OF THE SCDOT ENCROACHMENT PERMIT. CONTRACTOR SHALL ABIDE BY ALL CHARLESTON COUNTY REQUIREMENTS AT NO EXTRA COST TO THE OWNER.
- 16. DO NOT EXCAVATE WITHIN 5 FEET OF BETSY KERRISON PARKWAY WITHOUT CHARLESTON COUNTY AND SCDOT WRITTEN APPROVAL.
- 17. SCHEDULE SCDOT AND COUNTY INSPECTION AT LEAST 72 HOURS PRIOR TO EXCAVATION.
- EXCAVATIONS SHALL NOT BE LEFT UNATTENDED WHILE OPEN.







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SCALE: NTS

WATER NOTES

- THE CONTRACTOR IS REQUIRED TO "POT HOLE" EXISTING UTILITIES WELL AHEAD OF THE TRENCHING OPERATION TO VERIFY LOCATION, DEPTH AND POTENTIAL CONFLICTS. ABRUPT CHANGES IN THE PIPELINE GRADE/ALIGNMENT WILL NOT BE ALLOWED WITHOUT PRIOR OWNER APPROVAL.
- CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING BID.
- CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE; ANY DAMAGE DONE TO THE UTILITIES SHALL BE IMMEDIATELY REPAIRED AT
- THE CONTRACTOR SHALL VERIFY TYPE OF MATERIAL, OUTSIDE DIAMETER AND LOCATION OF ALL PIPES BEING CONNECTED TO, IN ORDER TO INSURE PROPER FITTINGS ARE AVAILABLE AND TO MINIMIZE OUT OF SERVICE TIME FOR
- ALL TEES, BENDS, PLUGS AND VALVES SHALL BE PROVIDED WITH MECHANICAL THRUST RESTRAINT AND RESTRAINED TO PROPER LENGTH. PLUGS INSTALLED ON ACTIVE WATER MAINS SHALL BE RESTRAINED. ENDS OF EXISTING LINES TO BE ABANDONED SHALL BE CAPPED WATER-TIGHT.
- VALVE BOXES SHALL BE SET TO MATCH FINISHED GRADES AND SHALL NOT BE LOCATED IN CURB.
- ALL DUCTILE IRON PIPE, VALVES, AND FITTINGS ARE TO BE POLYWRAPPED.
- 8. ALL MATERIALS AND WORKMANSHIP THAT RELATES TO THE WATER DISTRIBUTION SYSTEM SHALL BE IN ACCORDANCE WITH ST JOHNS WATER COMPANY STANDARDS.
- 9. FIELD ADJUST PIPE DEPTH AND LOCATION TO AVOID EXISTING CONFLICTS WITH OTHER UTILITIES.
- IO. AT A MINIMUM, THE FOLLOWING SYSTEM COMPONENTS SHALL NOT BE COVERED UP UNTIL THE COMPLETED PRODUCT IS REVIEWED BY THE IOPWSC, THE ENGINEER, OR ONE OF THEIR REPRESENTATIVES: VALVES, STUBOUTS, THRUST RESTRAINT FITTINGS, EXISTING UTILITY CROSSINGS, AND/OR CONNECTIONS TO EXISTING UTILITIES.
- SHOULD PIPE AND FITTINGS BE NEEDED IN ADDITION TO THAT SHOWN ON THE DRAWINGS BECAUSE PIPELINE WAS NOT INSTALLED ACCORDING TO THE ALIGNMENT AND PROFILE SHOWN, THEN THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THOSE NECESSARY MATERIALS AND PROVIDING THE EQUIPMENT AND LABOR TO INSTALL THEM TO MEET THE DESIGN INTENT AT NO ADDITIONAL COST TO THE OWNER. THIS INCLUDES CONNECTION TO EXISTING WATER
- 12. IF UNSUITABLE MATERIAL IS ENCOUNTERED, CONTRACTOR SHALL WRAP DUCTILE IRON FITTINGS AND/OR PIPE WITH POLYWRAP AT NO ADDITIONAL COST TO THE OWNER.
- 13. SEPARATION OF WATER MAINS AND SANITARY SEWERS AS WELL AS WATER MAINS AND STORM DRAINAGE LINES MUST MEET REQUIREMENTS OF THE "TEN STATE STANDARDS". ELEVATIONS FOR THE SCDOT PROPOSED IMPROVEMENTS ARE SHOWN FOR REFERENCE. CONTRACTOR SHALL LAY NEW WATER LINE TO PROVIDE A MIN. OF 18" OF VERTICAL SEPARATION BETWEEN WATER LINE AND SEWER LINE.
- 14. ALL WET TAPS ON EXISTING LINES SHALL BE DONE PRIOR TO INSTALLING NEW LINE.
- MINIMUM COVER ON ALL PIPELINES SHALL BE 3'-O", UNLESS OTHERWISE INDICATED OR DIRECTED BY THE ENGINEER. ALL PIPE SHALL BE PVC UNLESS OTHERWISE NOTED ON THE PLANS. EXCEPTIONS ARE WHEN CROSSING UNDER EXISTING STORM PIPE, WHERE THERE IS NOT 3 FEET OF COVER, OR WHERE CROSSING SEWER LINES REQUIRE DUCTILE IRON, AT THESE EXCEPTIONS DIP SHALL BE PROVIDED.
- 16. ALL LONG WATER SERVICE LATERALS SHALL BE BORED ACROSS THE STREET. THE COST OF THE BORE SHALL BE INCLUDED IN THE UNIT PRICE FOR THE SERVICE CONNECTION.
- 17. JOINT RESTRAINTS FOR MJ FITTINGS SHALL BE EBAA SERIES 2000 PV (UNLESS NOTED OTHERWISE) OR EQUAL APPROVED BY ENGINEER AND OWNER.
- 18. ALL BOLTS AND ALL THREADED RODS SHALL BE TYPE 316 STAINLESS STEEL. ALL NUTS SHALL BE TYPE 304 STAINLESS STEEL. ALL THREADS SHALL BE COATED WITH "NEVER SEEZE" OR EQUAL APPROVED BY ENGINEER AND
- ALL FITTINGS TO BE MEGALUG.
- 20. NO FIRE HYDRANT SHALL BE CLOSER THAN 4 FEET TO LIGHT POLE OR OTHER VERTICAL OBSTRUCTION.
- 21. FIRE HYDRANTS SHALL BE SET A MINIMUM OF 5' AND MAXIMUM OF 10' FROM THE EDGE OF PAVING OR THE TRAVEL LANE. PUMPER CONNECTION SHALL FACE THE STREET. HOSE CONNECTIONS SHALL BE FREE FROM OBSTRUCTION. DO NOT BLOCK NUTS OR BOLTS WITH ANY ITEMS. SET HYDRANT BREAK AWAY I" ABOVE FINISHED GRADE.
- 22. CONFIRM LOCATION OF FIRE HYDRANTS WITH OWNER BEFORE FINAL PLACEMENT.
- 23. THE PRICE OF FIRE HYDRANTS SHALL INCLUDE ALL WORK NECESSARY TO COMPLETE ITS INSTALLATION ACCORDING TO THE PLANS & SPECIFICATIONS INCLUDING HYDRANT EXTENSION.
- 24. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE SIZE OF ALL EXISTING METER(S) PRIOR TO ORDERING AND INSTALLING A CURB STOP SIZED FOR THE METER CONNECTION. NO ADDITIONAL FITTINGS (e.g. REDUCERS) WILL BE
- 25. SET METER BOXES TO MATCH EXISTING GRADES. IF RESIDENTIAL SERVICE NEEDS TO BE RAISED, CONTRACTOR SHALL COMPLETE AT NO COST TO THE OWNER.
- 26. ALL NEW MAINS SHALL BE SWABBED WITH A PIPE LINE PIG A MINIMUM OF THREE TIMES PRIOR TO TESTING FOR BAC-TS. CONTRACTOR SHALL SANITIZE LINES PRIOR TO BAC-T SAMPLING PER SPECIFICATIONS.
- 27. CONTRACTOR SHALL SUBMIT BAC-T SAMPLES TO TRIDENT LABORATORY OR DHEC CERTIFIED LAB.
- 28. THE OWNER RESERVES THE RIGHT TO EFFECT ANY REQUIRED REPAIRS AND WARRANT FOR THE COLLECTION FOR ALL ASSOCIATED COSTS FROM THE CONTRACTOR WHERE NECESSITATED BY EMERGENCY CONDITIONS OR BY THE
- 29. CONTRACTOR SHALL COORDINATE THE PROPOSED TIE-INS AND CUT-INS WITH THE OWNER AND THE ENGINEER. TWO WEEKS' NOTICE MUST BE GIVEN BY THE CONTRACTOR BEFORE STARTING THIS WORK (THIS WORK MAY NEED TO BE DONE AT NIGHT OR DURING PERIODS OF LOW FLOW).
- 30. ANY TIE-INS TO EXISTING LINES THAT WILL RESULT IN INTERRUPTION OF SERVICE TO ANY CUSTOMER MUST BE COORDINATED WITH THE OWNER AS TO ACCEPTABLE TIME AND DURATION OF INTERRUPTION. SCHEDULED INTERRUPTIONS OF SERVICE (TIE-INS, ABANDONMENTS, ETC.) REQUIRE 3 DAYS ADVANCE NOTICE.

SEWER NOTES:

- LOCATE SEWER SERVICE CONNECTIONS OUT OF DRIVEWAYS AND A MINIMUM OF TEN FEET FROM TREES. THE SEWER CONNECTION SHALL BE A MINIMUM OF 5 FEET DOWNSTREAM FROM THE WATER SERVICE.
- 2. ALL HORIZONTAL SEPARATION DIMENSIONS SHOWN BETWEEN WATER AND SEWER MAINS SHALL BE MEASURED FROM THE NEAREST EDGE OF EACH PIPELINE. MINIMUM SEPARATION BETWEEN WATER AND SEWER MAINS SHALL BE 10 FOOT HORIZONTAL AND 1.5 FOOT VERTICAL.
- PRIOR TO CONNECTING TO ANY EXISTING SEWER LATERAL OR MAIN, IT SHALL BE CLOSED CIRCUIT TELEVISION INSPECTED BY A LICENSED CONTRACTOR TO VERIFY THE LINE IS IN GOOD WORKING CONDITION AND FREE OF ALL DEBRIS.
- THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES, CODES, ORDERS, AND REGULATIONS WHICH IN ANY MANNER AFFECT THE CONDUCT OF THE WORK, SPECIFICALLY AS IT RELATES TO SEWAGE SPILLS. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PREVENTING SEWAGE SPILLS, FOR CONTAINING SEWAGE SPILLS, AND FOR RECOVERY AND LEGAL DISPOSAL OF ANY SPILLED SEWAGE, AND FOR ANY FINES, PENALTIES, CLAIMS AND LIABILITY ARISING FROM CAUSING A SEWAGE SPILL, AND FOR ANY VIOLATION OF ANY LAW, ORDINANCE, CODE, ORDER, OR REGULATION AS A RESULT OF THE SPILL(S).
- FOR WORK INVOLVING CONNECTION TO EXISTING FACILITIES: PRIOR TO THE START OF CONSTRUCTION WHICH INVOLVES ANY EXISTING WASTEWATER FACILITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING AND SUBMITTING TO THE ENGINEER FOR REVIEW AND APPROVAL, A WASTEWATER FLOW DIVERSION PLAN IN COMPLIANCE WITH THE UTILITIES' POLICY OF ZERO SPILLS AT LEAST FIFETEEN DAYS WORKING DAYS PRIOR TO IMPLEMENTATION OF THE PLAN. THE DIVERSION PLAN SHALL INCLUDE AN EMERGENCY RESPONSE PLAN INDICATING THE PROCEDURES, EQUIPMENT, AND ACTIVITIES THAT WILL BE IMPLEMENTED IN THE EVENT OF AN EMERGENCY SHUTDOWN OF FAILURE OF THE FLOW DIVERSION EQUIPMENT USED FOR CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE EMERGENCY PLAN.
- 6. FOR WORK WHERE BYPASS PUMPING MAY BE INVOLVED ADD: AT LEAST 15 WORKING DAYS PRIOR TO THE IMPLEMENTATION OF ANY FLOW DIVERSION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING AND SUBMITTING TO THE ENGINEER, FOR REVIEW AND APPROVAL, A WASTEWATER FLOW DIVERSION PLAN. THE CONTRACTOR'S WASTEWATER FLOW DIVERSION PLAN SHALL BE APPROVED BY THE UTILITY, BEFORE ANY FLOW CAN BE DIVERTED. THE DIVERSION PLAN SHALL INDICATE THE SEQUENCE OF DIVERSION OPERATIONS AND ALL OTHER OPERATIONS THE CONTRACTOR WILL ESTABLISH TO MAINTAIN WASTEWATER SERVICE DURING THE CONSTRUCTION PERIOD. THE DIVERSION PLAN SHALL INCLUDE A COMPREHENSIVE EMERGENCY RESPONSE PLAN, INCLUDING STANDBY REDUNDANT BY-PASS EQUIPMENT, IN THE EVENT OF AN EMERGENCY SHUTDOWN OF FAILURE OF THE FLOW DIVERSION EQUIPMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE EMERGENCY PLAN.

DHEC NOTES:

- EXPOSED POTABLE WATER PIPING AND PROCESS WATER PIPING SHALL BE LABELED AND COLR CODED WITHIN THE WASTEWATER TREATMENT PLANT AREA. LIKEWISE ALL PIPING SHALL BE LABELED WITH USE, FLUID AND FLOW DIRECTION.
- 2. A 2 HOUR PRESSURE LEAKAGE TEST AT A MINIMUM OF 100 PSI IS REQUIRED FOR ALL FORCE MAINS.
- 3. ALL TESTABLE BACKFLOW PREVENTORS MUST BE TESTED AND SATISFACTORY RESULTS PROVIDED TO THE LOCAL DHEC OFFICE PRIOR TO ISSUANCE OF FINAL OPERATIONAL APPROVAL.







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DATE: 12/16/16 DRAWN: DESIGNED: KEN REVIEWED: MFY APPROVED: MFY

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<u>I</u>	JTILITY SYMBOLS			LINE TYPES
DESCRIPTION	EXISTING	PROPOSED	DESCRIPTION	EXISTING
POWER LINE OVERHEAD	они		RIGHT-OF-WAY (ROW)	
UNDERGROUND FIBER OPTIC CABLE	F F		င့ ROAD	
TELEPHONE LINE	_ т т т		FASEMENT	
POWER LINE UNDERGROUND	N/A	UGP	EASEMENT -	
POWER POLE		\leftarrow	CLEARING LIMITS	N/A
LIGHT POLE	\$	*	FENCE LINE	X
			WETLANDS LINE	***
PA	VEMENT SYMBOLS			- ¥
DESCRIPTION	EXISTING	PROPOSED		
ASPHALT PAVEMENT			DRAINAGE	& TOPOGRAPHY SYMB
CONCRETE PAVEMENT			DESCRIPTION	EXISTING
GRAVEL SURFACING			CURB INLET	N/A
`			CULVERT	
<u> </u>	WATER SYMBOLS		GRATE INLET	
DESCRIPTION	EXISTING	PROPOSED	STORM MANHOLE (JUNCTION BOX)	N/A
WATER LINE	10"W		STORM PIPE	
WATER SERVICE W/ METER BOX			DITCH OR SWALE (UNPAVED)	
RECLAIMED WATER LINE	N/A	RM	CONTOUR	
BACKFLOW PREVENTER		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	SPOT ELEVATION	X SSMH
TAPPING SLEEVE AND VALVE	N/A	/a	COORDINATE LOCATION POINT	N 1000.00 E 1000.00
WATER LINE BEND	N/A		CIVIL LEGEND:	
FIRE HYDRANT W/ 6" VALVE & BOX		1	I. EXISTING TOPOGRAPHY AND OTHE ARE SHOWN SCREENED. SEE THE SURVEY BY THOMAS & HUTTON F	BOUNDARY & TOPOGRAPHIC OR THE SURVEY LEGEND.
YARD HYDRANT	N/A		 SEE EROSION & SEDIMENT CONTR CORRESPONDING LEGEND AND NO 	
GATE VALVE AND BOX	•	•		

SANITARY SEWER & FORCE MAIN SYMBOLS

N/A

TEE JOINT AND PLUG

DESCRIPTION	EXISTING	PROPOSED
SANITARY SEWER FORCE MAIN	——————————————————————————————————————	FM
SANITARY MANHOLE		•
GRAVITY SANITARY SEWER PIPE	12"SS ———	
PLUG VALVE		

DESCRIPTION	EXISTING	PROPOSED
RIGHT-OF-WAY (ROW)		
€ ROAD		, —— — ——
EASEMENT		
CLEARING LIMITS	N/A	CL CL
FENCE LINE	X	x
WETLANDS LINE		N/A

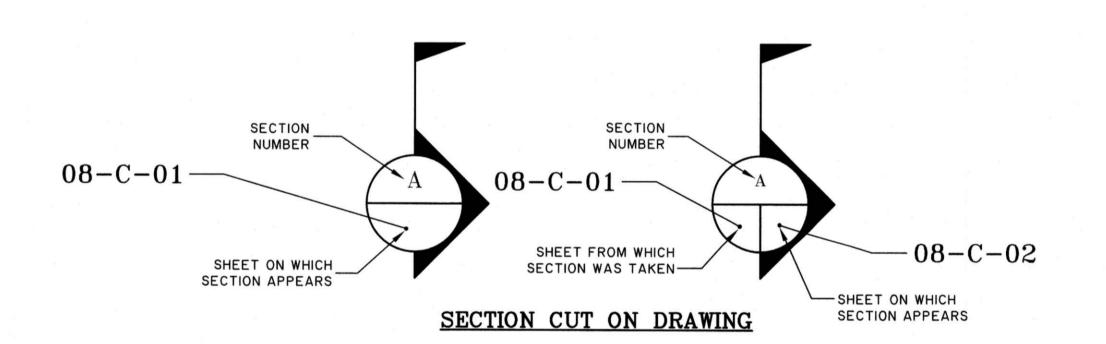
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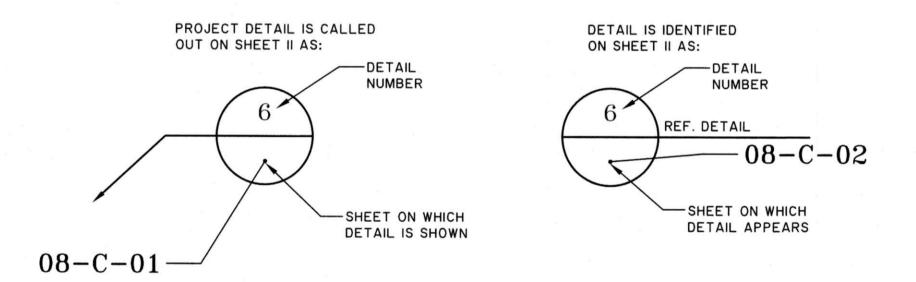
EXISTING	PROPOSED
N/A	N/A
	
N/A	•
X SSMH	17.28 X SSMH
N 1000.00 E 1000.00	N 1000.00 E 1000.00
	N/A N/A N/A 17.28 X SSMH N 1000.00

ABBREVIATIONS

BOC	BACK OF CURB
ВМ	BENCHMARK
BTTM	BOTTOM
BV	BALL VALVE
CI	CAST IRON
	CENTER LINE
و دل	CLEARING LIMITS
CMPA	[7] M. [10] (10.7) (10.7) (10.7) (10.7) (10.7) (10.7) (10.7) (10.7) (10.7) (10.7) (10.7) (10.7) (10.7) (10.7)
	CORRUGATED METAL PIPE ARCH
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CPP	CORRUGATED PLASTIC PIPE
DIA	DIAMETER
DOT	DEPARTMENT OF TRANSPORTATION
DI / DIP	DUCTILE IRON / DUCTILE IRON PIPE
EL	ELEVATION
EJ	EXPANSION JOINT
EOP	EDGE OF PAVEMENT
EW	EACH WAY
EXIST	EXISTING
FFE	FINISHED FLOOR ELEVATION
FIN	FINISHED
FLG	FLANGED
FM	FORCE MAIN (SANITARY SEWER)
FR	FRAME
FG	FINISHED GRADE
FE	FINISHED ELEVATION
GI	GRATE INLET
GV	GATE VALVE
HWY	HIGHWAY
HDPE	HIGH DENSITY POLYETHYLENE
ID	INSIDE DIAMETER
ΙΕ	INVERT ELEVATION
LF	LINEAR FEET
IRRG	IRRIGATION
MAX.	MAXIMUM
MJ	
	MECHANICAL JOINT
MIN.	MINIMUM
NTS	NOT TO SCALE
NIC	NOT IN CONTRACT
oc	ON CENTER
OD	OUTSIDE DIAMETER
PA	PRE AERATION
PEJ	PREMOLDED EXPANSION JOINT
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE

RAPP RCP RJ RM ROW / R/W SHC	RECYCLED ASPHALT REINFORCED CONCRETE PIPE RESTRAINED JOINT RECLAIMED WATER RIGHT-OF-WAY
SF SSD TOC TC TG TP TR TS	SQUARE FEET SANITARY SEWER SUBGRADE DRAIN TOP OF CURB TOP OF CONCRETE TOP OF GRAVEL TOP OF PAVEMENT TOP OF ROCK TOP OF SIDEWALK
TW TOW TYP W W/ WV Ø	TOP OF WALL TOP OF WATER TYPICAL WATER WITH WATER VALVE DIAMETER
PC POINT PT POINT BVC BEGIN EVC ENDIN e EXTER DELTA T TANG	ENT LENGTH TH OF CURVE
LISTED 2. THIS IS A THEREFOR	THE ENGINEER FOR ABBREVIATIONS NOT STANDARD ABBREVIATION LIST, RE, SOME SYMBOLS OR ABBREVIATIONS FAR ON THIS LIST AND NOT ON THE

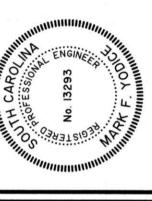




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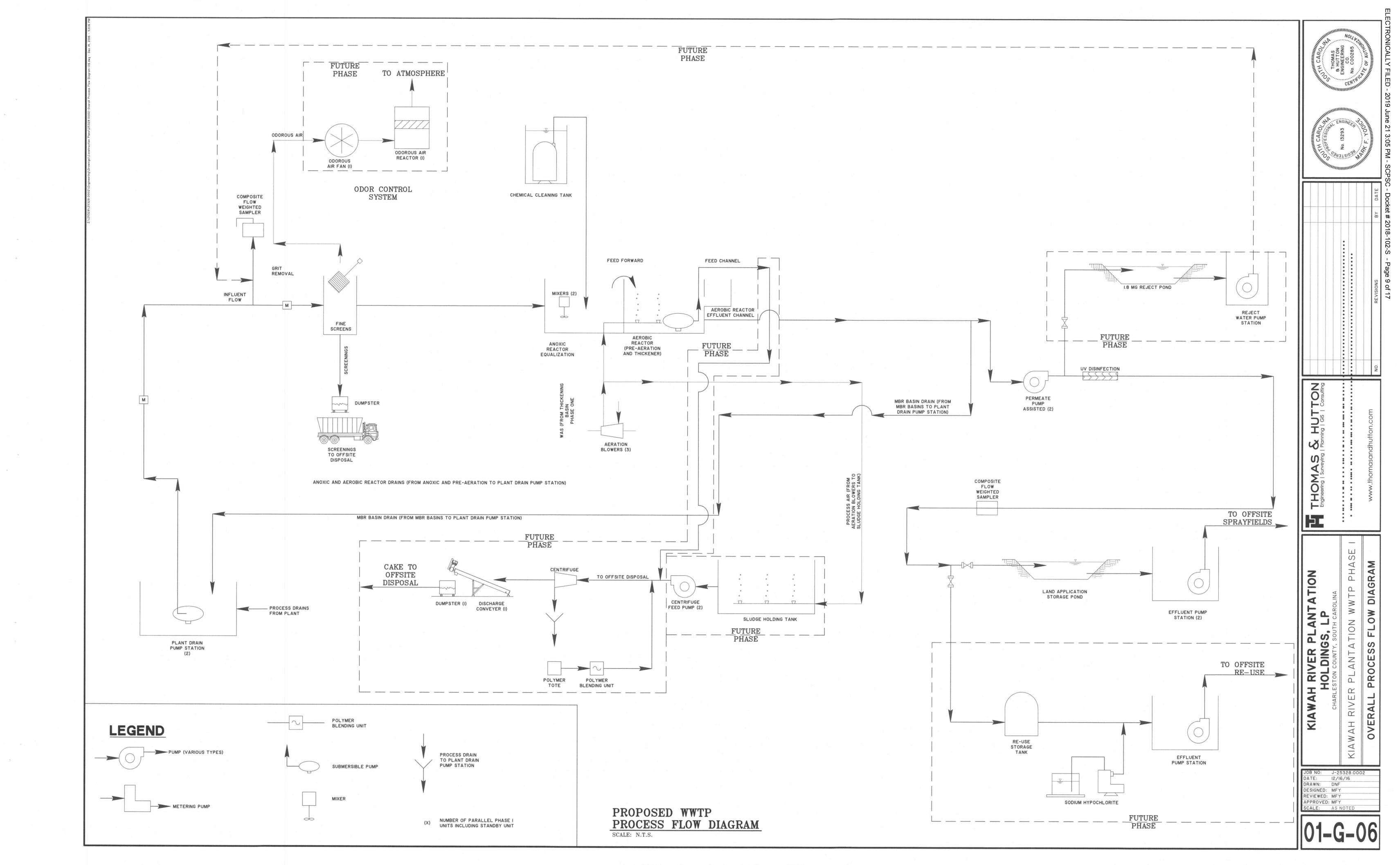
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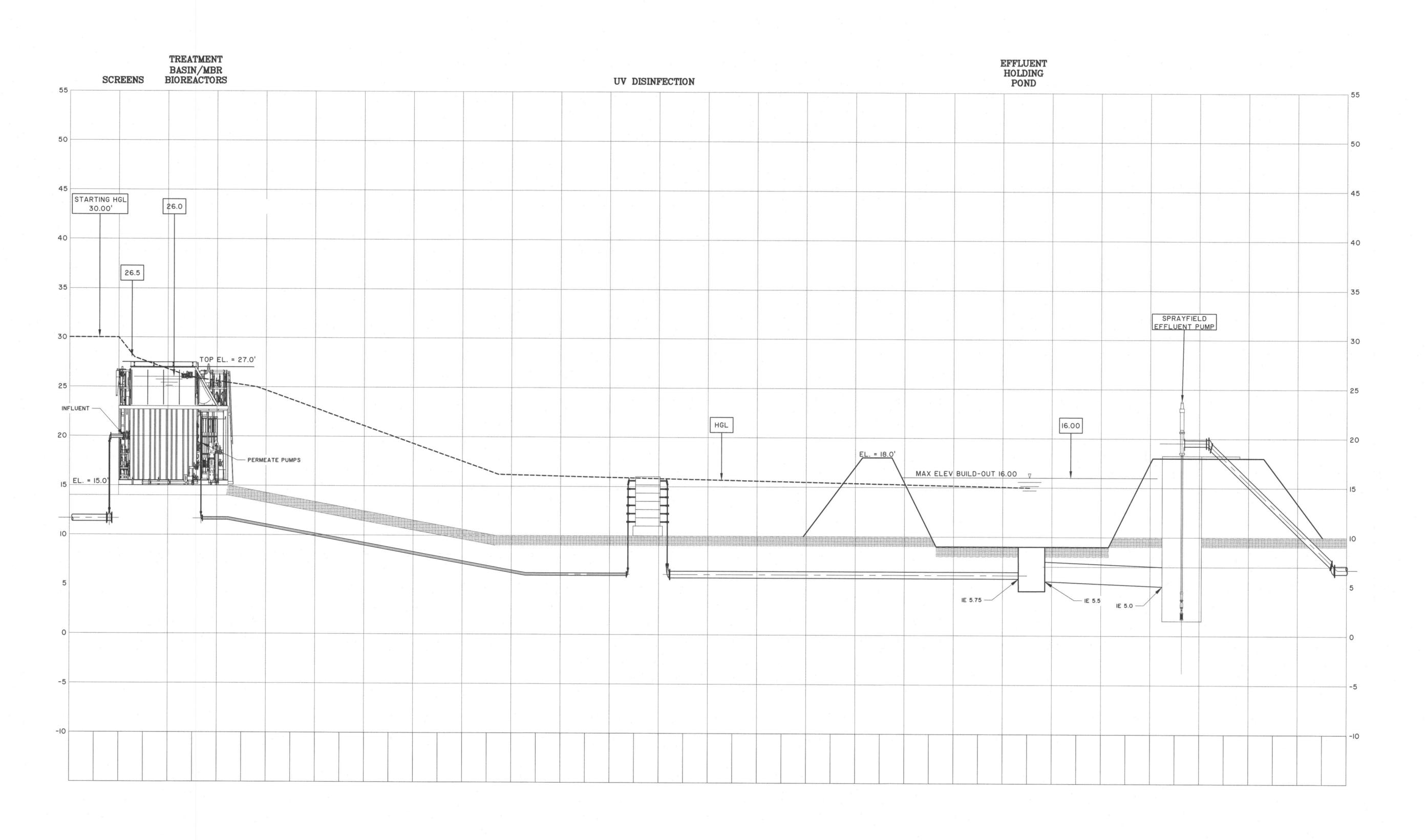
CHARLESTON COUNTY, SOUTH CAROLINA

KIAWAH RIVER PLANTATION WWTP PHASE

GENERAL CIVIL NOTES & LEGENDS KIAWAH RIVER PLANTATION HOLDINGS, LP

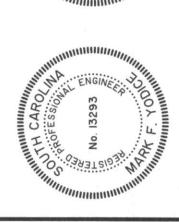
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DATE: I2/I6/I6
DRAWN: DNF
DESIGNED: KEN
REVIEWED: MFY
APPROVED: MFY
SCALE: NTS





HYDRAULIC PROFILE SCALE (H): NONE SCALE (V): 1" = 5'

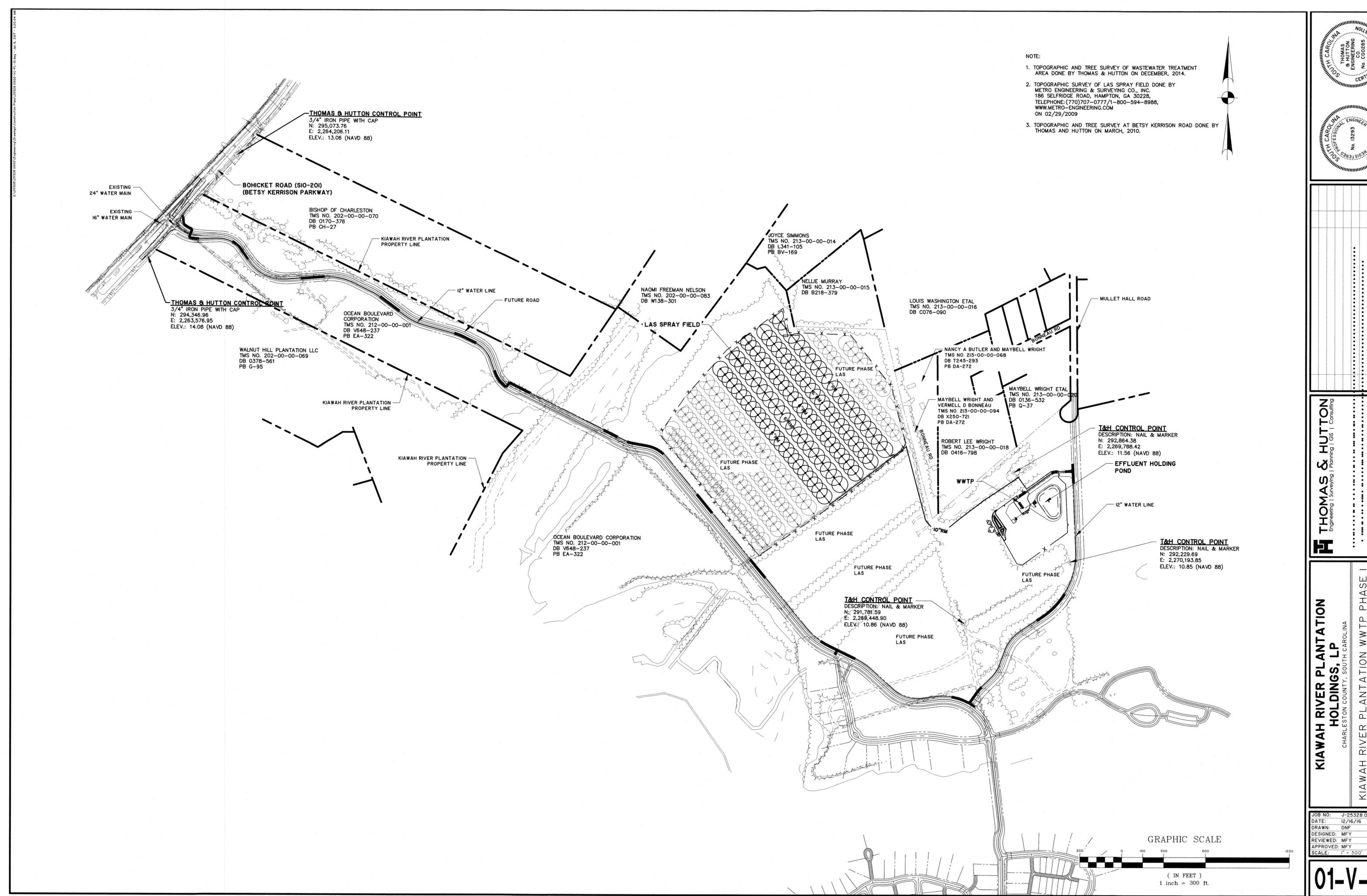


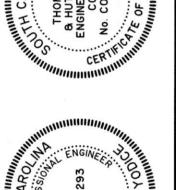


PHASE KIAWAH RIVER PLANTATION
HOLDINGS, LP
CHARLESTON COUNTY, SOUTH CAROLINA PROFILE

CHARLESTON COUNTY, SOUTH CRIVER PLANTATION HYDRAULIC KIAWAH

JOB NO: J-25328.0002
DATE: I2/I6/I6
DRAWN: DNF
DESIGNED: KEN
REVIEWED: MFY
APPROVED: MFY
SCALE: AS NOTED







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		DATE

RIVER PLANTATION WWTP PHASE SURVEY CONTROL SHEET

KIAWAH

